

 <p>Pollution Prevention Case Study</p>	<p align="center">Broadway of Green Bay</p> <p align="center">Replacing Acetone Solvent with an Aqueous Parts Cleaner</p>
Standard Industrial Classification (SIC)	Automotive Repair Services and Parts/7500
Type of Waste	Acetone solvent
Strategy	Process Modification
Company Background	Broadway of Green Bay is an automotive dealership and repair center. Based in Green Bay, Wisconsin, it employs 180 people and has been in business since 1916.
Original Process	An acetone solvent was used to clean parts.
Motivation	Broadway wanted to reduce the hazardous waste generated and make the operation more cost efficient. The company also wanted to improve the work environment and an environmentally friendly business.
Pollution Prevention Process	Broadway replaced solvents used to clean automobile parts with an aqueous parts cleaner. The aqueous process uses very hot water and soap to clean parts.
Stage of Development	Broadway has completely eliminated its solvent use.
Material/Energy Balance	<p>Original Process</p> <p>Feedstock Ten washers each using a 12-pound drum of solvent.</p> <p>Waste Each drum was changed every two months and generated 60 drums of waste solvent per year.</p> <p>Disposal The dirty solvent was removed by a hazardous waste management company.</p> <p>Pollution Prevention Process</p> <p>Feedstock Biodegradable soap and hot water</p> <p>Waste Waste water and non-hazardous oil</p> <p>Disposal Sludge is removed to a landfill as solid waste. Water is reused and then discharged to sewer system.</p>

<i>Economics</i>	<p>Capital Costs The aqueous washer unit costs \$4,000.</p> <p>Operation/Maintenance Costs The aqueous cleaning system is less labor intensive than the solvent cleaning method and is easier to maintain. Broadway no longer needs to contract with a hazardous waste management company to supply and maintain the solvent-based system. the new aqueous system costs less to operate than the previous service contract with the hazardous waste management company.</p> <p>Payback Period The unit has paid for itself in less than one year and has since provided significant savings.</p>
<i>Benefits</i>	Employees do not need to handle hazardous solvents or hazardous waste. The aqueous-based system is much less expensive and easier to care for than a service contract.
<i>Obstacles</i>	Obstacles were not encountered with the use of this product.
<i>Technology Transfer</i>	It is now available commercially and can be easily adapted for many uses.
<i>Other Pollution Prevention Activities</i>	<p>Broadway is using high volume low pressure (HVLV) paint guns/applicators.</p> <p>Waste oil is used to heat the facility during the winter (up to 8.5% of heat during the winter). Broadway has a self-contained cleaning water/treatment system that drains the water and puts it into a holding tank. The non-hazardous sediments contain soaps and oils which are removed and sent to a landfill. the water is reused. Broadway uses reusable rags and launders them instead of using disposable paper wipes. The company has also installed a filter system that maintains indoor quality and reduces worker exposure to air pollutants. Broadway has a computerized paint mixing system that reduces the amount of waste paint generated by mixing only what is needed. Broadway has been an inspiration to other vehicle maintenance shops. They participated in a DNR Vehicle Maintenance Workshop in Appleton in which their aqueous cleaning system to over 50 workshop participants. their presentation alleviated concerns about the effectiveness of this type of equipment.</p>
<i>Company Address</i>	<p>Broadway of Green Bay 2700 S. Ashland Ave. Green Bay, Wisconsin 54306-2366</p>
<i>Contact person</i>	<p>Mike Dalebroux 414/498-6677</p>
<i>Additional Publications</i>	Installation of a Dry Downdraft Booth for Auto Painting (PUBL TS-038)
<i>Pollution Prevention Resources</i>	<p>Free, On-site Technical Assistance University of Wisconsin Extension Solid and Hazardous Waste Education Center Milwaukee Area: 414/475-2845</p>

Remainder of state: 608/262-0385

Pollution Prevention Information Clearinghouse

Wisconsin Department of Natural Resources

Cooperative Environmental Assistance

608/267-9700 or e-mail: cea@dnr.state.wi.us



Bureau of Cooperative Environmental Assistance

Wisconsin Department of Natural Resources

P.O. Box 7921

Madison, WI 53707

608/267-9700

PUBL-TS-037 95